

Wednesday, 3/8/2006 10:37:48 AM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : SHROUD ASSEMBLY
 Job Number : 26107-2
 Estimate Number : 12303
 P.O. Number : N/A Part Number : D34673
 This Issue : 3/8/2006 S.O. No. : N/A Drawing Number : D3467 REV.A
 Prsht Rev. : NC Project Number : N/A
 First Issue : N/A Type : PURCHASED PARTS Drawing Revision : A
 Previous Run : N/A Material : N/A
 Due Date : 3/31/2006 Qty: 20 Um: Each
 Written By : SEE COMMENT BELOW
 Checked & Approved By : 06.03.08
 Comment : est rev. A 06.02.06 new issue EC

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 OUTSIDE SERVICE OUTSIDE SERVICES



Comment: Sub-Contracting Issue P/O: 00000768 06/03/09
 Email or Ship DXF file to vendor
 Laser Cut per Dwg D3467 flat pattern D3467-F 06/03/09
 Material release note required

2.0 D34673F TUBE FLAT PATTERN



Comment: Qty.: 1.0000 Each(s)/Unit Total: 12.0000 Each(s)
 DOUBLER FLAT PATTERN

3.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
 Receive & Inspect For Transit Damage
 Ensure material certification is attached

4.0 QC6 DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

5.0 SMALL FAB 1 SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1
 1-Roll as per dwg D3467
 2- Spot weld as per dwg D3467 & QSI004
 3-Form bead as per dwg D3467

SB 06/04/04 17

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
06/04/26	4	One taken for template	18/06/28	1		18/06/28	18/06/28

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☐ No ☒ DQA: ☒ Date: 06/04/26
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 3/8/2006 10:37:49 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHROUD ASSEMBLY

Job Number: 26107

Part Number: D34673

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Bo 06.04.25 (7)

7.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

Bo 06.04.25 (17)

8.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

Bo 06.04.26 (17)

Job Completion



u 06.04.26

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

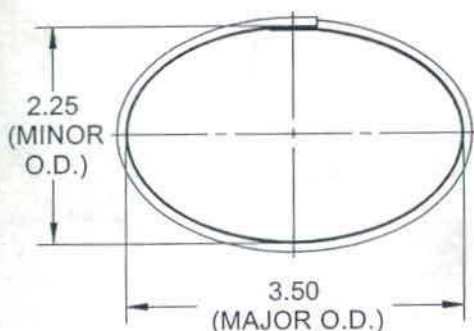
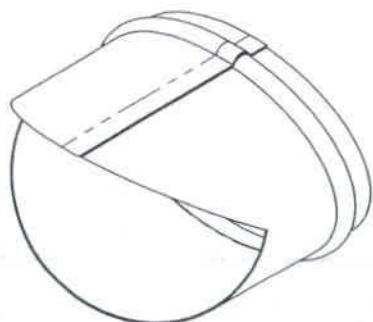
QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

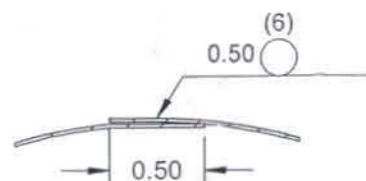
NOTE: Date & initial all entries

PRELIMINARY ISSUE

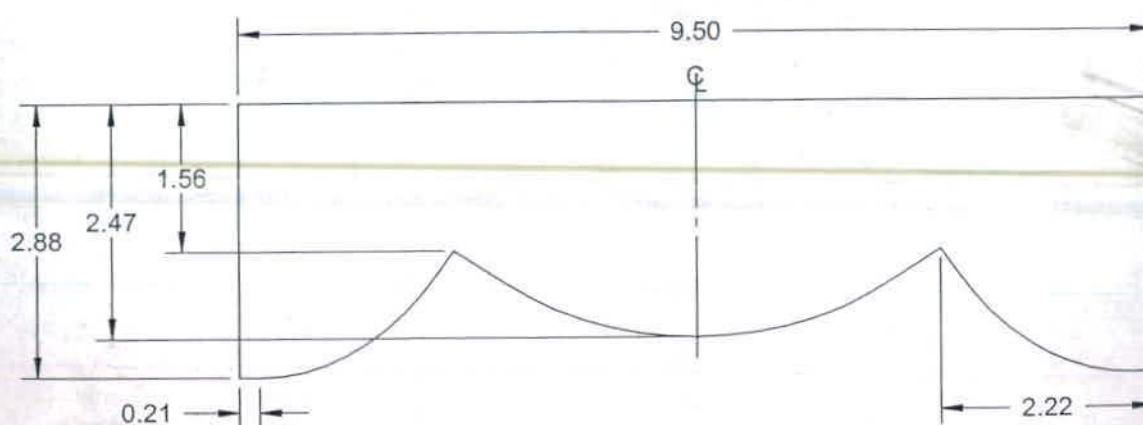
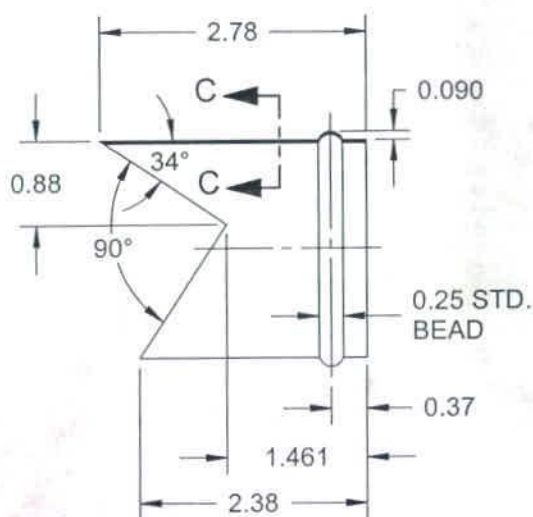
DESIGN 	DRAWN BY 	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D3467	REV. A SHEET 7 OF 15
DATE 05.12.07		TITLE SHROUD ASSEMBLY	SCALE 1:2



D3467-3 TUBE DETAIL



SECTION C-C
SCALE 1:1



D3467-3F TUBE FLAT PATTERN

NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET PER MIL-S-5019 (ANNEALED) 2B FINISH
26 GAUGE SS (0.018 THICK)
(REF. DART SPEC. M304S26GA)
- 2) FLAT PATTERN IS SYMMETRICAL ABOUT CENTERLINE
- 3) SPOT WELD PER DART QSI 004
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010

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3/17/06

604-946-453 ATTN: PETE

03/17/2006 14:36 FAX 604 946 4153
03/17/2006 14:18 FAX 604 2729137INDUSTRIAL LASER CUTTING
INTEGRIS METALS002
001/004

3/17/2006 1:57 PAGE 001/002 Fax Server


Ryerson

T-726 P. 007/016 F-537

253-280-3633

FROM-INTEGRIS

MAY-17-2005 16:05

		AK Steel Corporation Metallurgical Test Report Coshocton Works Coshocton, OH 43812		Page 1 Lead No. 7410672 SRN No. 7410672											
		INTEGRIS METALS PO BOX 340 MINNEAPOLIS, MN 55440		INTEGRIS METALS 306 'B' STREET ALHURM, WA 98001											
SKID ID SK0713143 SK0713144 SK0713145 SK0713149		PIECE 1 1 1 1		HEAT 7250151 7250151 7250151 7250151											
PARENT COIL ID 0549919-01 0549919-01 0549919-01 0549919-01		NET WEIGHT 2,345 LBS. 4012 KG. 2,370 LBS. 4,013 KG. 2,325 LBS. 4,008 KG. 2,401 LBS. 3,991 KG.		MILL ORDER NO. 772185-0191 PROCESSOR ORDER NO. 427135-01 BUYER ORDER NO. 427135-01 PART NO. 74251497 ENGLISH UNIT -PRODUCT- METRIC UNITS SIZE NOM 48.0900 X COIL											
TOTAL SKIDS 4		TOTAL PIECES 4		TOTAL NET WEIGHT 9,441 LBS. 16,075 KG.											
CHEMICAL ANALYSIS L-Ladle Analysis of Heat P-Product Analysis of Parent Coil															
ID	C	MN	P	S	SI	CR	NI	MO	N	CU	CO				
L 7250151	.049	1.39	.027	.001	.35	18.18	8.05	.35	.04	.30	.12				
SHIPPING DATE: 09/13/2003 REMARKS: NO INTENTIONAL ADDITIONS OF MERCURY OR MERCURY COMPOUNDS, RADIUM, ALPHA SOURCE, AND LOW MELTING ALLOYS OR ELEMENTS CAPABLE OF FORMING LOW MELTING ALLOYS WERE MADE THROUGHOUT THE PROCESSING OF THIS MATERIAL.						PRODUCT DESCRIPTION CR SRT TYPE 304 STAINLESS #28 FINISH SLIT EDGE * AMS 3513 * ALL TECH REQ'S HAVE BEEN MET UNLESS NOTED TO OR NOTED OTHERWISE * A SYN A 240 -04 EX PARA 3.1.3 ELONG WILL BE DETERMINED BY ASTM E 8 * ASTM A 490 -01 EX PARA 19.3.1 ELONG WILL BE DETERMINED BY ASTM E 8 EX PARA 26.3.1.3 COIL WILL BE TAPPED ON OUTSIDE ONLY * ASTM A 666 -03 * IN-001 Rev 0, * IN-011 0 * BUYER PART# 74251497 * ASME SA-240 SECTION II PART B (2001 ED. 2002 ADDENDA) EX PARA 3.1.3 ELONG WILL BE DETERMINED BY ASTM E 8 * EN-10204 3.1.3									
PARENT COIL ID	FOR	DIR	COND	% ELONG 2 INCH MEASURED	TENSILE STRENGTH (KSI)	YS .2% OFFSET (KSI)	ROCKWELL HARDNESS TAIL	ROCKWELL HARDNESS FRONT							
0549919-02	T	T	ASTM	71.2	105.2	37.1	72	74							
*** CONTINUED ON NEXT PAGE ***															

Fax Server

T-726 P.008/015 F-537

		AK Steel Corporation Metallurgical Test Report Coshocton Works Coshocton, OH 43812		Page 2	
		Lot No. 7410672 BRN No. 7410672		Lot No. 7410672 BRN No. 7410672	
INTERGRIS METALS PO BOX 380 MINNEAPOLIS, MN 55440		INTERGRIS METALS 505 "B" STREET P AUBURN, WA 98001		BILL ORDER NO. 427136-01 PROCESSOR ORDER NO. 427136-01 BUYERS ORDER NO. 427136-01	
TEST SPEC MINNEAPOLIS, MN 55440		TEST SPEC MINNEAPOLIS, MN 55440		TEST SPEC MINNEAPOLIS, MN 55440	

PARENT COIL	POS	DIR	COND	ASTM	BEND	TENSILE	Y.S.	HARDNESS	HARDNESS
0549918-02	T		ASTM	PASS	180				
PARENT COIL	POS	DIR	COND	2 INCH	17				
ID	(97)	(R, T, D)		MEASURED	(KSI)				
0549919-02	F	T	ASTM	71.0	92.8		33.1	B 72	B 74
PARENT COIL	POS	DIR	COND	BEND					
ID	(97)	(R, T, D)		17					
0549919-02	F		ASTM	PASS					

<p>THE COSHOCTON WORKS AND THE COSHOCTON WORKS METALLURGICAL TEST REPORT ARE NOT TO BE USED FOR ANY OTHER PURPOSES THAN THE ONE FOR WHICH THEY WERE PREPARED. THE COSHOCTON WORKS METALLURGICAL TEST REPORT IS THE PROPERTY OF THE COSHOCTON WORKS AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM THE COSHOCTON WORKS.</p> <p>AK Steel Corporation 10/10/2009 5/19</p>	<p>THIS CERTIFIED TEST REPORT HAS BEEN OBTAINED TO A COSHOCTON WORKS METALLURGICAL TEST REPORT FROM AK Steel Corporation. NO OTHER TEST REPORTS OR INFORMATION CAN BE OBTAINED FROM THE COSHOCTON WORKS METALLURGICAL TEST REPORT. THE COSHOCTON WORKS METALLURGICAL TEST REPORT IS THE PROPERTY OF THE COSHOCTON WORKS AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM THE COSHOCTON WORKS.</p> <p>AK Steel Corporation 10/10/2009 5/19</p>
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MATERIAL TEST REPORT

From: NORTH AMERICAN STAINLESS CANADA, IN
740 IMPERIAL ROAD NORTH

Page : 1
Heat/Lot : 86K8
TIN : B42748

Sold To: INTEGRIS METALS, LTD.
7910 40TH STREET SE
CALGARY, AB T2C2Y3

Ship To: ***CUSTOMER PICKUP***
4375 14TH STREET NORTHEAST
CALGARY
ABT3E7A9

Vendor Information

Cust PO #: 406824

Cust PO DT: 11/03/05

Specifications

STAINLESS STEEL SHEET, COLD ROLLED, ANNEALED AND PICKLED.
ASTMA240/04a 480/04a, 666/03, ASME SA240/04-A05, 480/04-A05, SA666/04
Q08766D-A X 11G FRM, AMS5513H X MRK&FIN, MIL5059D, AMD3, X CRWN MEAS
CORROSION: ASTM A262/02aB; 180Bend-OK
Buyer Part: 4288441
304 2B .1305 IN 48 IN 96 IN
Country of Origin: UNITED STATES

Mechanical Tests

		UOM	L	O		UOM	L	O
Yield Strength - 0.2% Offset	40	KSI	F	TRANSV				
Tensile Strength (UTS)	93.3	KSI	F	TRANSV				
Rockwell B	85		F	TRANSV				
Pct Uniform Elong 2 In/50mm	57.01	PCT	F	TRANSV				
Rockwell A	85		T	TRANSV				

Chemical Composition

C Carbon-Pct	.059	CR Chromium-Pct	18.360
CU Copper-Pct	.342	MN Manganese-Pct	1.643
MO Molybdenum-Pct	.285	N Nitrogen-Pct	.037
NI Nickel-Pct	8.150	P Phosphorus-Pct	.029
SI Silicon-Pct	.289		

Comments

MATERIAL TEST REPORT

From: NORTH AMERICAN STAINLESS CANADA, IN
740 IMPERIAL ROAD NORTH

Page : 2
Heat/Lot : 86K8
TIN : B42748

Material free from mercury contamination. No weld repairs.
EN 10204 3.1 PED 97/23/EC Annex1, Para. 4.3 Q08763F Cond A
This document certifies the material has been tested in
accordance with applicable specifications described herein
and has met those requirements.

QA by ERIC HESS 02/01/2006

Miscellaneous Data

GUKLEH, OMN K123
Control #: S1C60214
Part #: 74271441
.135 X .48 X .96

Date: 03/17/06

SOLD TO: INDIAN LAKE

TO 110880

S/O 90-374786 - 02

Eric Hess 3/17/06

The Chemical Analysis and Mechanical Test
data was received via EDI from the above
mentioned vendor.

INTEGRIS METALS, LTD.

004/004
002

INTEGRIS METALS

03/17/2006 14:18 FAX 6042729137
04/20/2015 08:27 FAX

